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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,119	09/10/2004	George Kammler	016906-0322	4162
23428 7590 10/20/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007				
EXAMINER CORRIGAN, JOSEPH JAMES				
ART UNIT		PAPER NUMBER		
3744				
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10/20/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,119

Applicant(s)

KAMMLER, GEORGE

Examiner

JOSEPH CORRIGAN

Art Unit

3744

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23, 25-36 and 38-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23, 25-36 and 38-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. This action is in response to amendment dated May 22, 2008.
2. Applicant's arguments with respect to claims 23, 25-36, and 38-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 23, 25, 26, 28-30, 32-36 and 38-42 are rejected under 35 U.S.C. 102(b) as being anticipated by How '1,862,310').

In re claim 23, How discloses a heat exchanger (see figure 1) comprising: first (22) and second (20) terminating elements; at least one tube (one tube of the plurality of tubes in marked up figure 1) through which a first medium is configured to flow, wherein the at least one tube comprises a first end region (see marked up figure 1) connected to the first terminating element (22) and a second end region (see marked up figure 1) connected to the second terminating element (20); a first tube part (15, 45, 47, see marked up figure 1) connected to the first terminating element (22); a second tube part (10, see marked up figure 1) connected to the second terminating element (20), wherein the first (15, 45, 47) and second (10) tube parts run radially into one another at least

over a partial region of their axial extent (see marked up figure 1), wherein one of the first and second tube parts comprises two continuous ring-like elements (see marked up figure 2) protruding radially towards the other of the first and second tube parts; and at least one sealing element (46) disposed between the two ring-like elements (created by element 16 channel in a spatial region (16) between the first and second tube parts (see marked up figure 1); **wherein the continuous ring-like elements form at least one chamber (16, center bore per How nomenclature) between the first tube part (15, 45, 47) and the second tube part (10) in which the at least one sealing element (46) is disposed, and wherein the continuous ring-like elements serve as support that acts radially for the first and second tube parts (see marked up figure 1).**

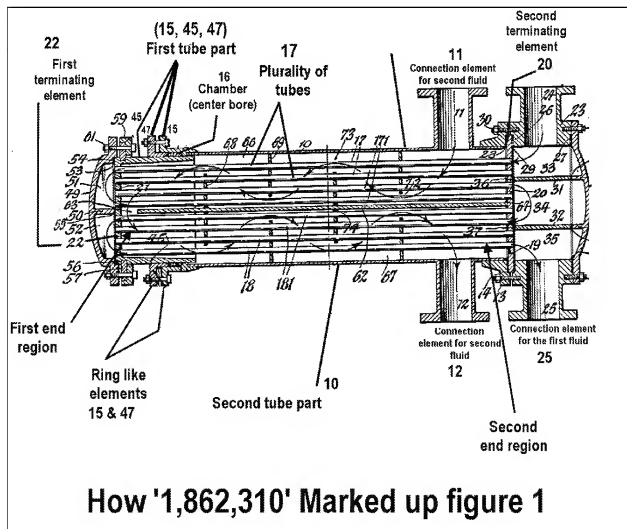
In re claim 25, How discloses the invention above and further discloses that the at least one chamber (16) is formed by the first tube part (15, 45, 47) and a second tube part (10).

In re claim 26, How discloses the invention above and further discloses that the chamber (16) is at least substantially sealed off by the two ring-like elements (see marked up figures 1 and 2). (Ring elements are created when gland bore element 16 is created)

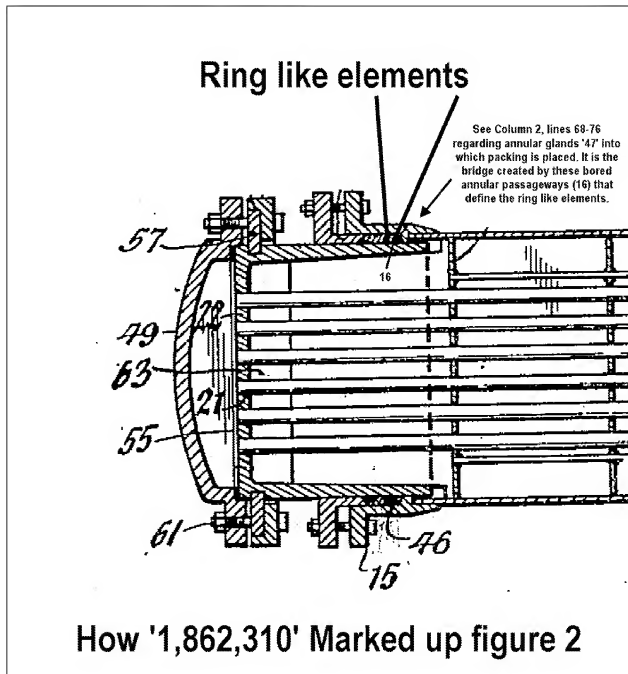
In re claim 28, How discloses the invention above and further discloses that the chamber is at least partially filled with an elastic medium (46, packing, C2, L70) which comprises the at least one sealing element (see marked up figure 1).

In re claim 29, How discloses the invention above and further discloses that the chamber is filled such that the elastic medium (46) forms an annular element (see marked up figure 2) extending radially between the first (15, 45, 47) and second tube parts (10).

In re claim 30, How discloses the invention above and further discloses that the at least one sealing element (46, C2, L67-73 re annular space filled with packing material) is laid into the chamber as a ring element (see marked up figure 2).



In re claim 32, How discloses the invention above and further discloses that the first and second tube parts (marked up figure 1) form a substantially sealed spatial region when the first and second tube parts are connected (see marked up figure 2) at their respective terminating elements (20, 22) and the at least one sealing element (46) is provided in the chamber (16), wherein at least two connection elements (11, 12) are provided such that a second medium is configured to flow through the spatial region through the connection elements (11, 12).



In re claim 33, How discloses the invention above and further discloses that the second medium flows around the at least one tube through which the first medium flows

(see marked up figure 1 flow arrows).

In re claim 34, How discloses the invention above and further discloses that the continuous ring- like elements is spaced apart in an axial direction (bored annular gland passageways meet the limitation).

In re claim 35, How discloses the invention above and further discloses that the continuous ring- like elements (see marked up figure 2) form integral constituents of the one of the first and second tube parts (formed between elements 45 & 47 which are constituents of the ring-like elements). (See marked up figure 1).

In re claim 36, How discloses the invention above and further discloses that the continuous ring- like elements are additional components connected to the one of the first and second tube parts. (See marked up figure 1).

In re claim 38, How discloses the invention above and further discloses that the continuous ring- like elements serve as axial bearings. (Please note that ring elements in marked up figure 1 (constituent of the second tube part), when fastened together, serve as bearings against first tube part when vibration occurs.)

In re claim 39, How discloses the invention above and further discloses that the at least one tube comprises a plurality of tubes (see marked up figure 1, 17) through which the first medium flows, wherein the plurality of tubes are arranged substantially parallel to one another radially inside the first and second tube parts. (See marked up figure 1).

In re claim 40, How discloses the invention above and further discloses that the plurality of tubes are each connected, at their respective first end regions (see marked up figure 1), to the first terminating element (tubesheet 22) and are each connected, at

their respective second end regions, to the second terminating element (tubesheet 20).
(See marked up figure 1).

In re claim 41, How discloses the invention above and further discloses that the first end regions (see marked up figure 1) of the at least one tube (17) is connected to a connection element (24) for supplying the first medium, discharging the first medium, or a combination thereof.

In re claim 42, How discloses the invention above and further discloses that at least one of the first and second terminating elements (second terminating element 20) is connected to at least one connection element (24) for supplying the first medium, discharging the first medium, or a combination thereof.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

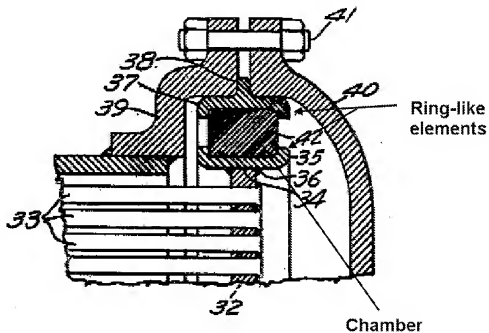
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over How '1,862,310' in view of Lucke '2,512,748'.

In re claim 27, While How teaches a chamber sealed off by the two ring-like elements, he does not explicitly teach that the chamber is not sealed off by the two ring-like elements.

Lucke '748 discloses a chamber not sealed off by the two ring-like elements (See marked up figure 4).

It would have been obvious to a person of ordinary skill in the art at the time invention was made to modify How with a chamber that is not sealed off by the two ring-like elements as taught by Lucke '748 in order to advantageously allow tube parts to be removed more easily, thereby, saving time during repairs.



Lucke '2,512,748' Marked up figure 4

3. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over How '1,862,310' in view of Feigenbaum et al '4,450,212'.

In re claim 31, How discloses an elastic medium type sealing element above; however, he fails to explicitly teach at least one sealing element can be introduced into the chamber as a pasty or gel medium.

Feigenbaum et al disclose a pasty medium used in sealing a joint of a heat exchanger.

It would have been obvious to a person of ordinary skill in the art at the time invention was made to modify How with a pasty sealant used in sealing a mating joint (broadly termed a chamber) as taught by Feigenbaum et al in order to advantageously provide a fluid tight seal between the exterior and the interior of the heat exchanger avoiding escape of poison gas, thereby, preventing illness.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph J. Corrigan whose telephone number is 571-270-3213. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisors are Cheryl Tyler or Frantz Jules on (571) 272-4834 or (571) 272-6681, respectively. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph J Corrigan
Examiner
Art Unit 3744
10/08/08

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